

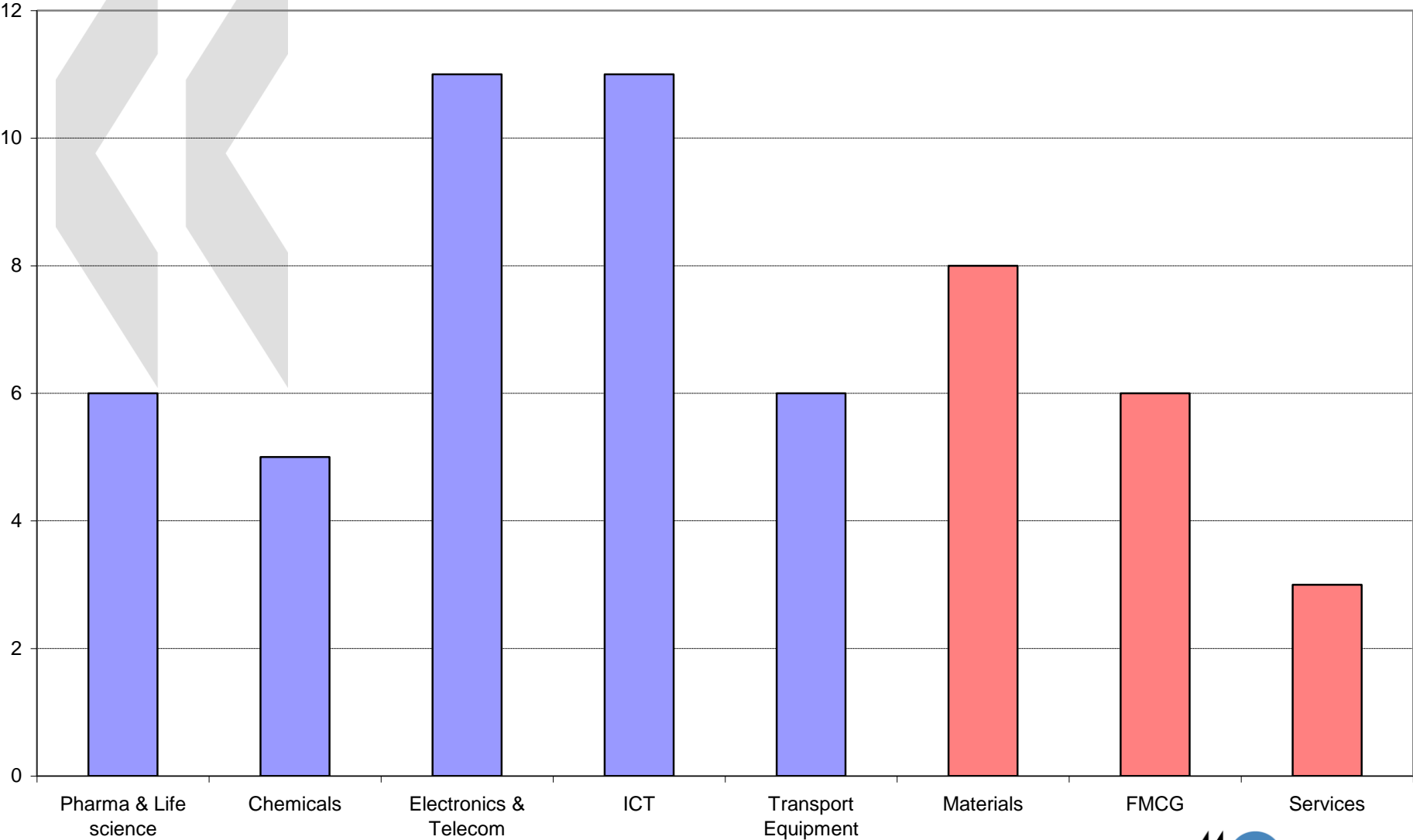


Insights from the Company Case Studies

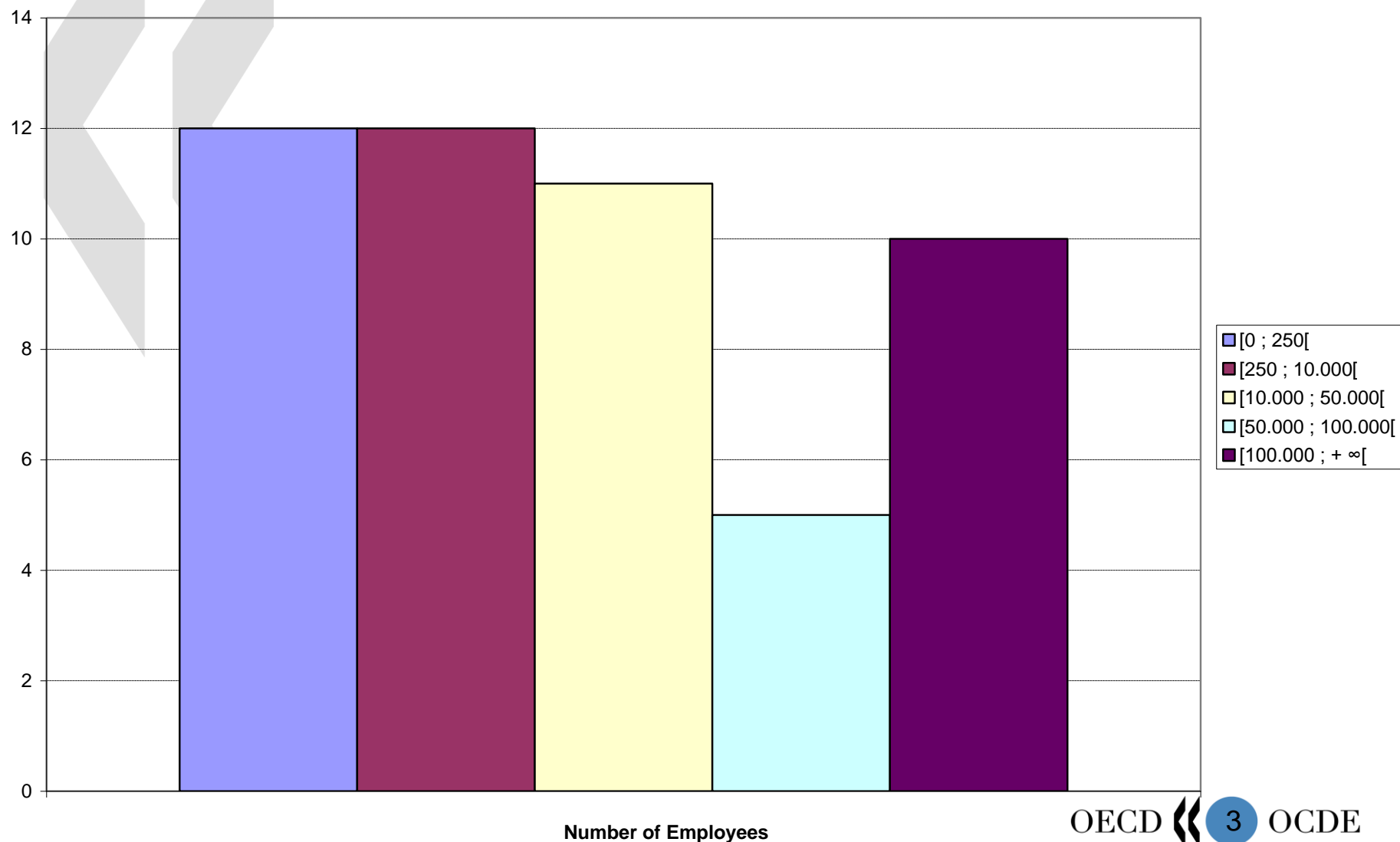
Els Van de Velde


Vlerick Leuven Gent Management School

Number of company case studies, by industry



Number of company case studies, by employment

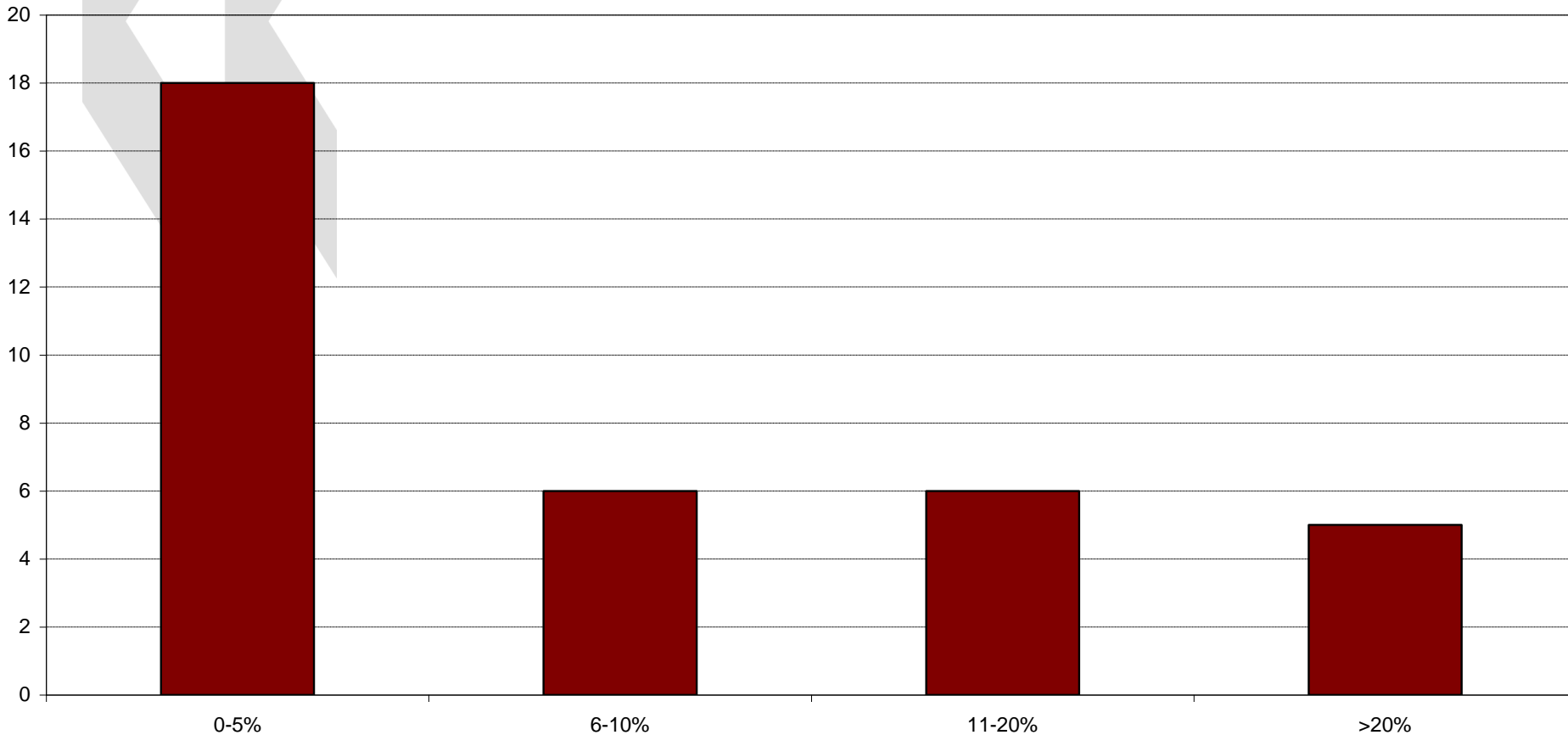




Insights from the Quantitative Part of the Questionnaire

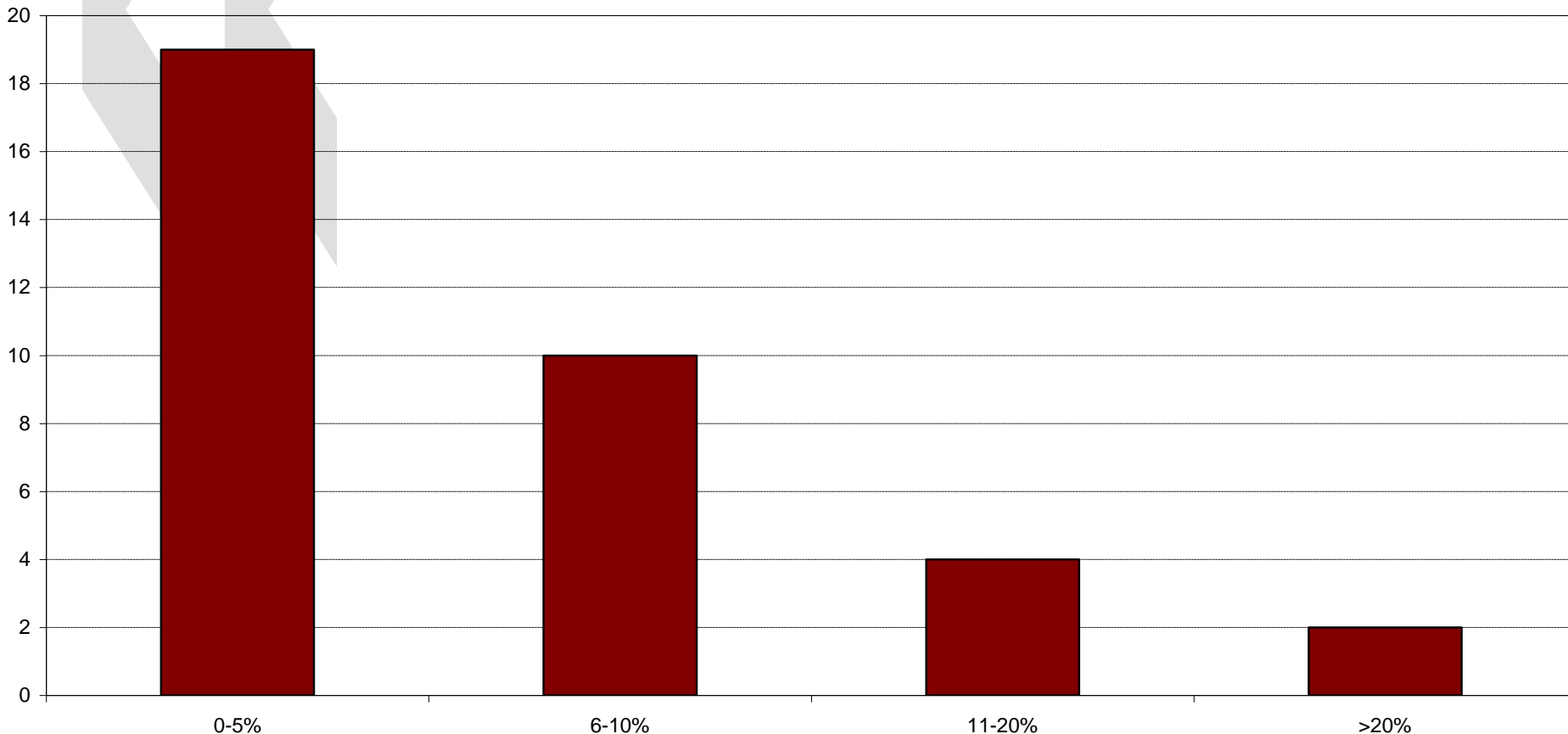
Proportion of companies' R&D investment used to fund outside research in companies

% funding outside research in companies

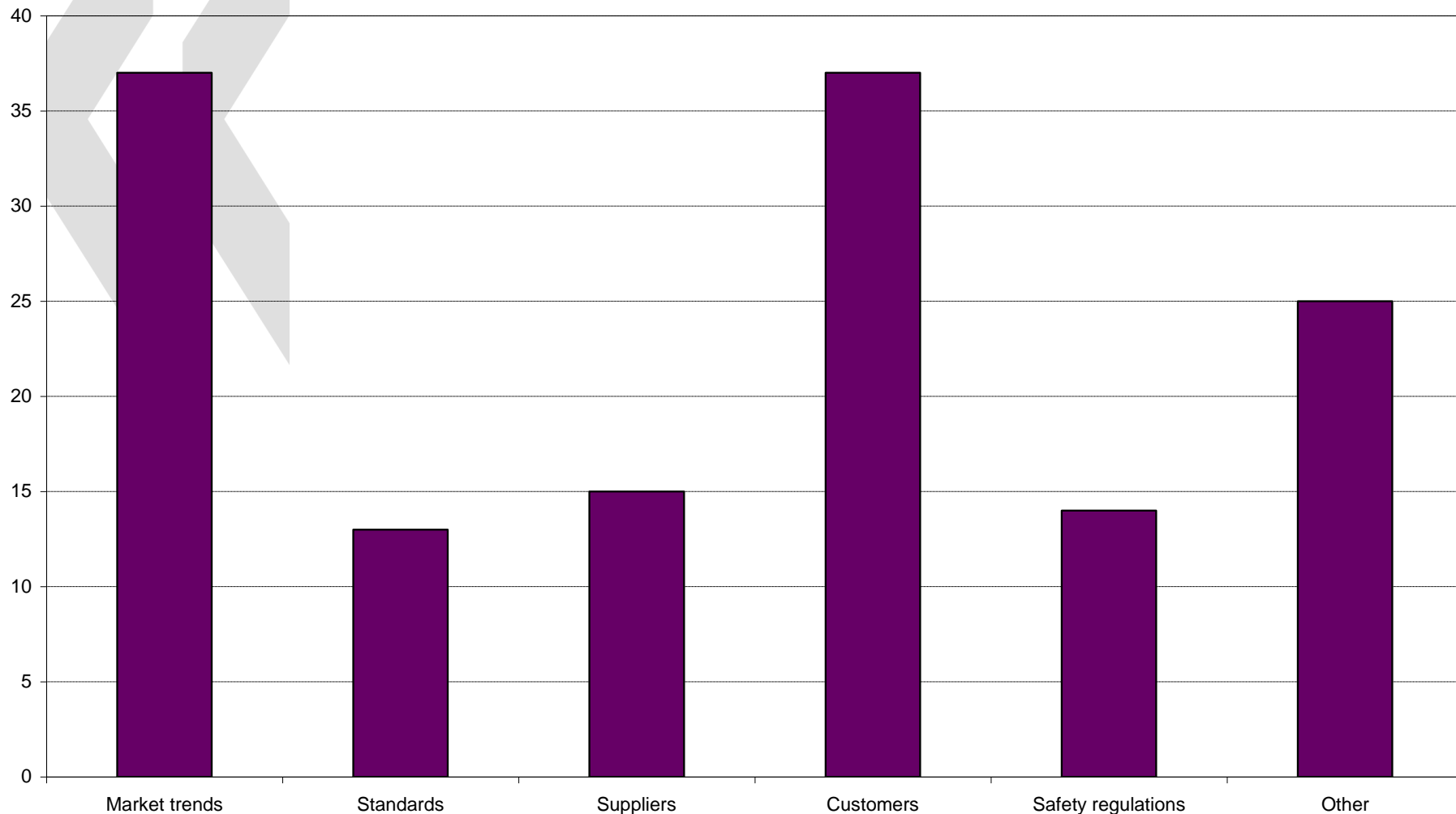


Proportion of companies' R&D investment used to fund outside research in public organizations

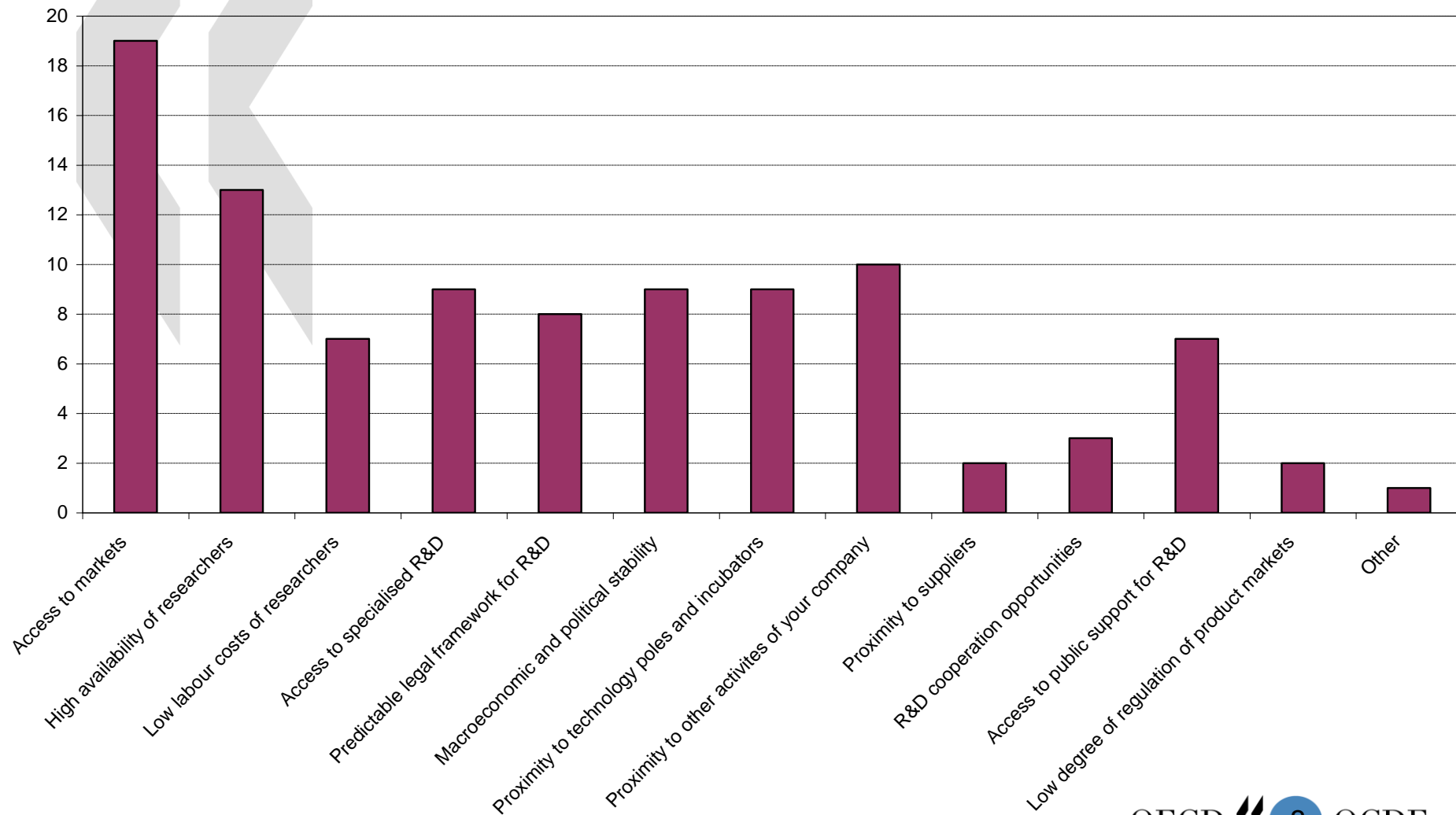
% funding outside research in public organisations



Activities other than R&D, important in realizing innovations



Critically important reasons for the location of R&D facilities





Main Insights from the Qualitative Part of the Questionnaire

The Use of External Sources of Innovation

- Major motivation:
 - To increase the speed of innovation, especially by tapping into knowledge from research institutes, companies and adjacent markets
 - Focus on specific technology or product, not on company
 - To increase the number of ideas for new projects
 - To attract and retain talent
 - To increase external funding of ideas and technology developments

The Use of External Sources of Innovation

● MNEs and SMEs

- For MNEs: open innovation happens at two levels
 - Open through close cooperation with external partners
 - Open between business units
- For SMEs:
 - Lead users (market information, new trends, ...)
 - Close interaction between people, creating an ecosystem inside and outside the company
 - Open innovation model is often (partly) internalized at the moment of acquisition

The Use of External Sources of Innovation

- MNEs are very active in creating ecosystems
 - High tech campuses & networks
 - Valuable partnerships
 - Spill-over effects
 - Not geographically based, but rather technology-based
- Engagement in partnerships
 - Valuable partnerships
 - Complementary skills
 - Reputation
- IT tools
 - Innovation portals
 - Technology intermediaries

Alternative Ways of generating Revenue with in-house Innovations and External Innovations

- When?
 - In case the technology is not part of the core strategy, but has a huge potential
 - In case of small potential, technology/idea is killed
- Corporate venture capital fund
- Spinning-off companies
- Posting on websites of technological brokers

Assessment of the Value of 'External' Projects/Companies

- Assessment units with different objectives:
 - Business Development group: active screening of market
 - Financing funds e.g. venture capital initiatives and CVC funds
 - Emerging Business Opportunities: identify potential business growth areas
 - Business group for scouting
 - Research centers in which other firms are invited to cooperate
- Corporate venturing program
 - To invest in start-ups & other companies
 - To keep an eye on potential opportunities
 - To establish mutual trust
- Spinning-in companies
 - Primarily technology focused, on not financially
 - Focus on potential market success of innovations
- Joint ventures and other collaboration agreements

Human Resource Management

- Creating an innovation culture within the company is very important
 - The innovation culture needs to be present and operative at every level
 - Give autonomy to employees
 - Install a decentralized management structure
 - Diversity leads to new thoughts, new insights
 - Trust is crucial: the more space employees get, the more involved they become
 - Emphasis on knowledge exchange & sharing, and on communication

Intellectual Property Rights

- IPR have become important in almost all industries:
 - Non-disclosure agreements
 - Confidentiality and exclusivity agreements
 - Brands, design, models
 - Patents:
 - Important in sectors such as the pharmaceutical sector, but hinder innovation in other sectors such as ICT
- IPR for defensive reasons:
 - To protect the business
 - To prevent others from taking out a patent that is peripheral for the business
- However, companies engaged in OI practices
 - Licensing activities
 - Strategic alliances
 - Sharing technologies



Towards an Integrated Model of Open Innovation

Open Innovation: Exploration & Exploitation

	Outside-in	Inside-out
Searching/exploration → with universities/research institutes	A	B
Collaboration → companies		
Selling/buying <ul style="list-style-type: none"> ● Licenses ● Patents ● Spin-in ● Spin-off 		



To strengthen the core technology

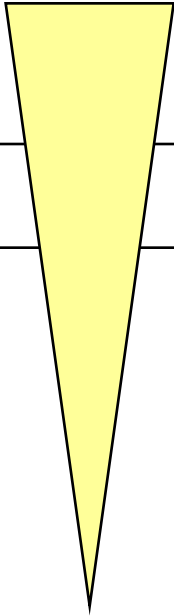


To search for new technologies/new applications

A: Tend to close-up at the moment of commercialisation

B: Tend to be open since not all required knowledge is available within the company

Outside-in process

	Outside-in
Searching/ exploration	
Collaboration	
Selling/buying <ul style="list-style-type: none">● Licenses● Patents● Spin-in● Spin-off	

Size dependent:

-Small firms have less possibilities to engage in open innovation practices due to resource constraints

Industry dependent:

- Opportunity conditions
- Appropriability conditions
- Cumulativeness of technological knowledge
- Complexity of the knowledge base

Outside-in process

Short life cycle of technology



High CA

Engage in outside-in to keep up with the industry

e.g. ICT, Electronics & Telecommunications

Long life cycle of technology



High IPR + high value

Engage in outside-in to keep up with research

e.g. Pharma, Chemicals, Materials



High IPR + low value

Engage in outside-in to keep up with new developments

e.g. Transport Equipment, FMCG